# JSC★s SHINING STAR

## Cooke pushes limits in space and at sea

**By John Ira Petty**

When Mrs. Moon took her fourth-grade class at Stevens Elementary in northwest Houston to the cafeteria to watch Alan Shepard's Mercury launch in 1961 on the school's black-and-white TV set, she didn't know what she was starting.

One of those fourth graders was Doug Cooke. From that moment he knew what he wanted to do in life – he wanted to be a part of the space program. Now he's manager of JSC's Advanced Development Office and that office's Exploration Office. That involves leading the future exploration effort throughout NASA. Now those efforts focus on a return to the moon and later to Mars. "All jobs have their moments, but this is a great one – probably one of the best jobs at NASA," Cooke says.

Through much of his NASA career, which began 25 years ago not long after he graduated from Texas A&M, Cooke has been involved in programs high on the list of NASA priorities.

He also helps design and sail America's Cup boats.

After watching the Shepard coverage and, as a fifth grader, the John Glenn Mercury mission, Cooke was determined to take all the science courses he could and worked hard at them. He graduated from Waltrip High School and with an aerospace engineering degree from A&M with 4.0 grade point averages.

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**–Doug Cooke**

JSC Photo S98-20497

**Doug Cooke, manager of the Exploration Office, is shown with models of Mars lander concepts.**

His first job at JSC was in the entry analysis section, and he wound up putting together the aerodynamic flight testing for the shuttle's approach and landing tests and subsequent entry flight tests. "We were flying the shuttle in Mach regimes where nobody had ever done it before," Cooke said. "It was really a unique opportunity. I started that effort two years out of college."

In 1984 he moved to the space station program, heading an analysis group that came up with initial configuration, defined its orbital altitude, and internal configuration of modules.

Later he worked on proposals to achieve President Bush's goal of returning to the moon and going to Mars. Then, in 1991, he was program manager of the Exploration Programs Office. In 1993, a team was put together to redesign the space station – during that nine-month effort Cooke led the engineering of the redesign. A new vehicle organization was formed at JSC later that year where Cooke was vehicle manager. The office led the design and engineering of the International Space Station. Later he became deputy program manager (technical) for space station.

Two years ago, after the announcement of indications of past life in the Mars meteorite, he was asked to lead the Exploration Office. He works with JPL to design robotic missions that will help send humans there. They also will fly payloads on the shuttle to understand the technology required to send people to Mars.

Cooke was on the design team for America II America's Cup syndicate from 1983 to 1986. The boat, skippered by Houston's John Kolius, was eliminated before the cup finals. Now he's on the design team for the Aloha Racing America's Cup Challenge based in Hawaii. The Houston Yacht Club also is cooperating in that America's Cup campaign and the design team has offices there. Two new boats are to be launched in May and June.

In between he helped win the International 50-footer world championship with Kolius on a boat called Abracadabra, a competition that attracted the world's best sailors.

Sailing started at 16, with an invitation to sail with an uncle and a cousin to sail with them from Kemah to Padre Island on a 24-foot boat. Planning began in the winter for the June trip, and Cooke built and started sailing on a small sailboat. He soon went to work at a plant that made small fiberglass sailboats, and there met the owner of a Flying Dutchman, an Olympic class boat. Crewing got Cooke hooked on racing.

Through racing he met Kolius, with whom he jointly owned a boat. The America II campaign followed. It involved Cooke flying to Newport, Rhode Island, to sail the 12-meters almost every weekend. He traveled to Australia for the elimination rounds.

Cooke has a number of other interests – from Civil War weapons to classic cars to swimming. He says his wife, Renee, whom he met in high school, is very understanding of his fast-paced lifestyle. They have two children, Rebecca, 19, and Jeff, 16.

"I've been very fortunate," he said. "I've had a lot of great jobs over the years. It's been a great experience – it always seemed like I got to work on whatever the big effort was at the time.

"I really want to see us get started on what it takes to go beyond Earth orbit. Most of us at NASA want to go explore space – go back to the moon, to Mars," he said. "I want to be in the middle of helping make that happen." ■

## Educators conference attracts record attendance

Teachers from throughout the United States and Canada discovered a multitude of ways to use space as a theme to motivate their students and enliven their classrooms during the 5th annual International Space Station Educators Conference February 5-6 at Space Center Houston.

This year's conference attracted 425 registrants from 29 states and 7 Canadian provinces, a record attendance. The event draws primarily elementary and high school teachers as well as museum educators and a few university professors who teach future teachers.

"A number of teachers from across the country attend this conference every year," said Susan Tortorici, Space Center Houston education specialist and conference organizer. "Many school districts send large groups of teachers every year because this event provides them with so much educational material on the nation's space program."

One purpose of the conference is to inform educators about the status of the space station and provide them with educational materials. The other reason is to encourage them to incorporate what they learn into their current curricula.

As Chuck Lloyd, NASA deputy manager, ISS Payloads Office, told the educators in his speech on the first day of the conference, "I ask you as educators to think about the information presented during this conference. It should penetrate each and every one of your educational areas. The challenge, most definitely for the earlier grades, is to try to apply this material."

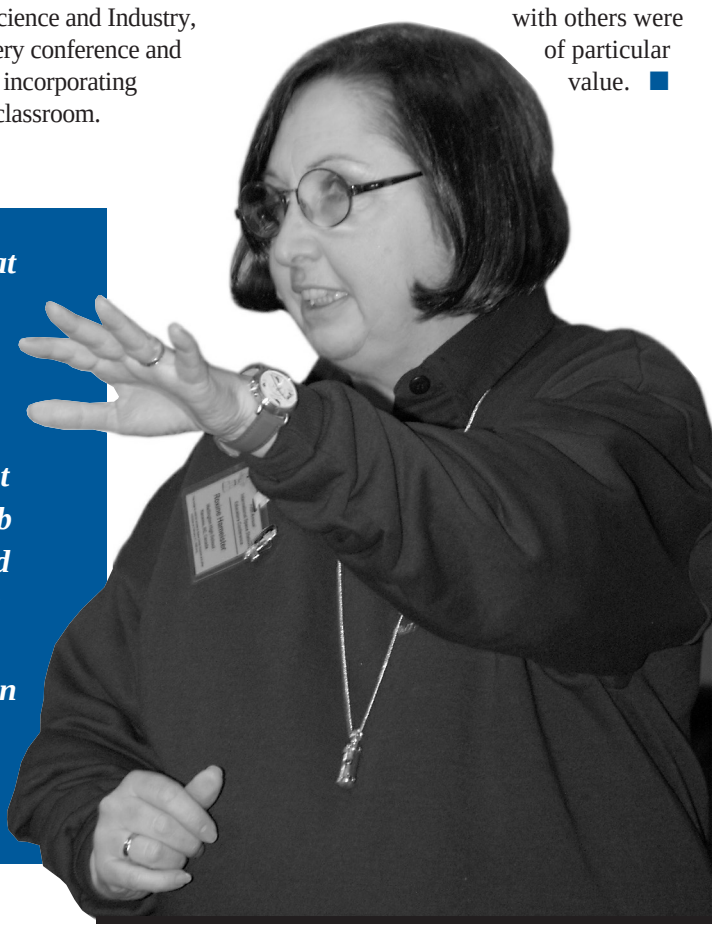
Marcy Novak, elementary school teacher from Lombard, Ill., and educator with Chicago's Museum of Science and Industry, said she has attended every conference and has had much success in incorporating lessons learned into her classroom.

"I've been integrating space into my classroom for twelve years," said Novak. "I found it is the way to motivate students. Once you start working with space, you can teach them anything."

Although learning more about technical aspects of the ISS was of interest to the educators in attendance, equally important was the unique opportunity to network with their colleagues. Repeatedly, participants noted that the one-on-one discussions with others were of particular value. ■

**Roxinne Hameister, right, Wellington High School teacher from Vancouver, conducts a workshop on the human body in space during the International Space Station Educators Conference. Workshop participants, below, simulate experiments that were conducted during STS-90, the Neurolab mission.**

*'I'm hopeful that experiments conducted in space, including those performed during the recent STS-90 Neurolab mission, will lead to treatments for many afflictions that affect human beings.'*
– Roxinne Hameister, teacher



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